

**Abstract**

Output optical power of an optical transmitter is regulated to compensate for fluctuations in output optical power and for tracking error. Dual loop automatic power control includes an optical sensor feedback loop for sensing optical energy proximate a  
5 back facet of the optical transmitter and a thermal sensor feedback loop for sensing thermal energy at point proximate the optical transmitter. Fluctuations in sensed thermal energy are indicative of the tracking error of the optical transmitter. Signals indicative of the sensed optical and thermal energy are combined and utilized to regulate the output optical power to be approximately constant over a predetermined range of temperatures.